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University of California
College of Agriculture
Agricultural Experiment Station
Berkeley, California

SEASONAL LABOR NEEDS FOR CALIFORNIA CROPS

SAN LUIS OBISPO COUNTY

Progress Report No. 40

by

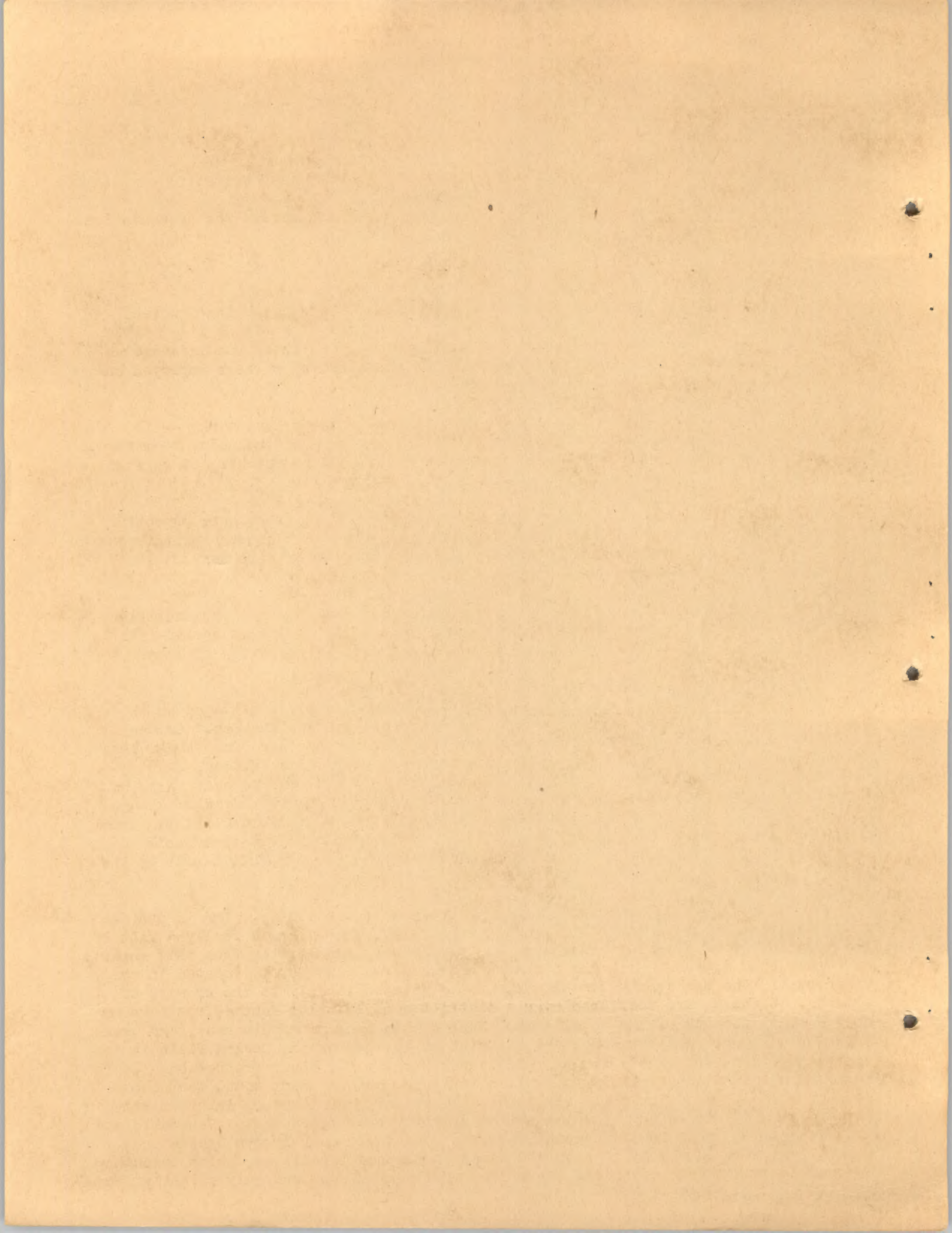
R. L. Adams

October, 1936

Preliminary -- Subject to Correction

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Progress Report #40

Seasonal Labor Needs for California Crops

San Luis Obispo County (exclusive of the Oso Flaco district)

Scope of Presentation.-- The following considerations govern the presentation of this progress report:

1. The data are confined to the area indicated above.
2. The data are confined solely to crops, livestock needs being ignored.
3. The findings apply only to occasional or seasonal labor requirements as distinguished from labor contributed by farm operators and by workers employed on a year-round or regular basis of employment.
4. Attention is concentrated upon workers required for hand tasks -- planting, thinning, weeding, hoeing, and harvesting -- without including teamsters, tractor drivers, irrigators, hay balers, threshermen, and shed packers of vegetables or fruits.
5. The presentation includes the so-called migratory, transient, or roving workers which comprise an important source of help needed in connection with certain tasks and at "peak" times which seasonally arise in connection with many field, truck, and fruit crops commercially produced in California.
6. This report is confined to California's need for seasonal agricultural workers because of the more pressing problems liable to arise in connection therewith. A later study is planned which will deal with other kinds of labor involved in the production of California's many crops.

Brief Description of the Area.-- San Luis Obispo County is situated on the coast of California about midway between San Francisco and Los Angeles. On the north it joins Monterey County, the boundary line running eastward from the ocean, crossing the Santa Lucia Mountains, the upper end of the Salinas Valley, and extending beyond it to the crest of the Mount Diablo Range. On the east it joins Kern County, the boundary line following a general southeasterly direction along the Mount Diablo and Temblor ranges until it reaches the Santa Maria Valley. From this point westward to the ocean, the Santa Maria River divides it from Santa Barbara County on the south. On the west it is bounded for its full length by the Pacific Ocean.

There are several important farming districts in the county. One is the Oso Flaco district in the southwest corner of the county, and which is really a part of the Guadalupe "deal" of Santa Barbara County. It has been omitted from this report, as it has been included with the Santa Barbara report. Another is located in the vicinity of Paso Robles and San Miguel, and is devoted largely to the growing of almonds. Orchards are scattered over a district some 18 miles square, but make up only a small portion of the total area. Much of the land is mountainous, and used only for pasture. Another important district is located on the Carisa Plain in the central eastern part of the county, and is used mostly for wheat production. It is about 20 miles in length and 4 to 8 miles in width, and is about 2,000 feet above sea level. A third district is located in the vicinity of Shandon, in the north-eastern part of the county at an elevation slightly over 1,000 feet. Vegetable and truck crops are grown in the coastal valleys, especially near Arroyo Grande and Oceano, and also on the hills near the coast in various localities, which areas may be considered a fourth district. This lies mostly at elevations only slightly above

Progress Report No. 1

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San Luis Obispo County (exclusive of the Oceano district)

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sea level except where the hills are farmed to elevations of several hundred feet. A fifth district includes the San Luis Valley, in the southwestern part of the county, near the city of San Luis Obispo. It is about 12 miles in length and from 1 to 4 miles in width, and lies at an elevation of 100 to 250 or 300 feet. Los Osos and Chorro valleys, smaller in extent and adjoining San Luis Valley, may be considered a part of the same area.

The soils of the county are varied, but generally are of the heavier textures. Some sandy loams and loams were noted, but clay loams of several different series probably make up the bulk of the agricultural land.

The county contains a total of 2,133,760 acres, of which 406,093 are classed as available for crops by the 1935 Census. This is further classified as follows by the Census for the crop year 1934:

	<u>Acreage</u>
Crop land harvested	153,776
Crop failure	44,260*
Crop land idle or fallow	104,736
Plowable pasture	<u>103,321</u>
Total	406,093

Crop acreages in 1935 are estimated to have been as follows:†

	<u>Acreage</u>
Field crops	194,203
Vegetable crops	19,430
Fruit and nut crops	<u>19,847</u>
Total	233,480

* The season of 1934 was abnormally dry, resulting in much greater acreage of crop failure than usual.

† Chalmers, Thomas, County Agricultural Commissioner. Crop report of agricultural products of San Luis Obispo County, 1935.

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The soils of the county are varied, but generally are of the heavier texture. Some sandy loams and loams were noted, but clay loams of several different series probably make up the bulk of the agricultural land.

The county contains a total of 2,133,780 acres, of which 408,093 are classed as available for crops by the 1935 Census. This is further classified as follows by the Census for the crop year 1934:

Average	
153,773	Crop land irrigated
44,280	Land in crop but not irrigated
104,733	Land in crop but not irrigated or fallow
103,331	Land in crop but not irrigated or fallow
408,093	Land in crop but not irrigated or fallow
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† Chairman, Thomas, County Agricultural Commissioner. Crop report of agricultural products of San Luis Obispo County, 1935.

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Crops, Acreages, and Production.-- The basis used in calculating occasional or seasonal need for labor, other than that furnished by farm operators and regularly employed workers, appears as table 1.

TABLE 1

Basis for Calculating Seasonal Labor Requirements -- San Luis Obispo County, exclusive of the Oso Flaco district.

Crops	Acreage	Production
Field crops:		
Alfalfa*	2,700	9,400 tons
Barley	17,800	249,800 cwt.
Beans -- mostly small, white and pink	8,100	56,360 cwt.
Flower seeds	240	--
Hay	48,000	76,800 tons
Oats	3,700	48,980 cwt.
Sugar beets	2,278	18,680 tons
Wheat -- Carisa Plain	40,900	376,760 cwt.
other districts	66,800	841,010 cwt.
Vegetable crops:		
Peas -- spring (bush)	8,900	251,200 crates of 60 pounds †
fall (poles)	849	148,575 crates of 60 pounds †
Lettuce	1,674	192,510 crates
Tomatoes	1,029	141,000 lugs
String beans	123	6,312 cwt.
Artichokes*	451	55,350 boxes
Brussels sprouts*	83	21,230 boxes
Cucumbers*	58	40,190 lugs
Mixed vegetables*	566	--
Orchard crops:		
Apples*	420	760 tons
Apricots*	376	224 tons
Grapes	1,073	2,700 tons
Pears	592	440 tons
Prunes	1,617	840 tons
Almonds	15,282	480 tons ‡
Walnuts	337	237 tons §
Miscellaneous	150	--

* Use of seasonal labor on these crops inconsequential, and hence ignored.

† Production of peas estimated as follows: spring crop at 28 crates per acre; fall crop at 175 crates per acre.

‡ In the eight years, 1928-1935, inclusive, total almond production in the county has ranged from 3,560 tons to 166-1/2 tons, with an average of about 1,637 tons.

§ The Walnut Control Board estimates the 1935 pack from San Luis Obispo County at 5,287 bags (of 100 pounds) of merchantable walnuts, or about 264 tons.

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TABLE 1

Basis for Calculating Seasonal Labor Requirements -- San Luis Obispo County, exclusive of the Gas Plant district.

Crops	Average	Production
Field crops:		
Alfalfa*	2,700	9,400 tons
Barley	17,800	249,800 cwt.
Beans -- mostly small, white and pink	8,100	56,380 cwt.
Flower seeds	240	--
Hay	48,000	78,800 tons
Oats	2,700	43,980 cwt.
Wheat	2,278	18,680 tons
Wheat -- (white) Main other districts	40,900	275,750 cwt.
	66,800	541,010 cwt.
Vegetable crops:		
Beans -- spring (bush)	800	20,200 cwt. at 25 pounds †
Beans -- spring (pole)	800	16,875 cwt. at 25 pounds †
Beans -- fall (pole)	1,874	102,610 cwt.
Cauliflower	1,028	141,300 lbs.
Corn	123	6,312 cwt.
Cucumbers*	151	22,850 boxes
Eggplants*	82	11,830 boxes
Peas*	58	40,180 lbs.
Mixed vegetables*	566	--
Orchard crops:		
Apples*	450	750 tons
Apricots*	378	234 tons
Cherries*	1,073	300 tons
Pears	182	440 tons
Peaches	1,017	840 tons
Plums	1,023	480 tons
Almonds	237	237 tons
Walnuts	180	--

* Use of seasonal labor on these crops inconsequential, and hence ignored.

† Production of peas estimated as follows: spring crop at 28 cwt. per acre; fall crop at 175 cwt. per acre.

‡ In the eight years, 1925-1932, inclusive, total almond production in the county has ranged from 2,500 tons to 168,172 tons, with an average of about 1,637 tons.

§ The Walnut Control board estimated the 1932 crop from San Luis Obispo County at 5,287 bags (or 100 pounds) of merchantable walnuts, or about 264 tons.

Operations Requiring Use of Seasonal Labor and Time of Need.--- Farm operations requiring the use of seasonal or occasional labor for the various crops raised in San Luis Obispo County are indicated in table 2. This tabulation does not include the employing of shed workers needed to wash, pack, and prepare various commodities for shipping and marketing.

TABLE 2

Operations Requiring Use of Seasonal Labor and Times of Needs
by Crops -- San Luis Obispo County

Crop	Operation	Time of need
Field crops:		
Beans	Hoeing -- not done extensively -- ignored.	
	Piling -- mostly done by regular help -- ignored.	
	Threshing (by stationary machines)	September 1-30 -- 60 per cent of crop
	66 per cent by seasonal workers	October 1-25 -- 40 per cent of crop
Grain -- wheat, barley, and oats	Harvesting wheat by combine	July 1-31 -- 40 per cent of acreage
	Carisa Plain -- 50 per cent by seasonal workers	August 1-31 -- 40 per cent of acreage
		September 1-30 -- 20 per cent of acreage
	Hauling bulk grain to ranch bins and to town, from Carisa Plain district	July 1-31 -- 40 per cent of crop
		August 1-31 -- 40 per cent of crop
		September 1-30 -- 20 per cent of crop.
	Harvesting by combine -- other districts -- 50 per cent by seasonal workers	June 15-30 -- 20 per cent of acreage
		July 1-30 -- 60 per cent of acreage
		August 1-31 -- 20 per cent of acreage
Hay -- other than alfalfa (mostly grain hay)	Mowing -- 25 per cent by seasonal workers	May 1-31 -- 75 per cent of acreage
		June 1-15 -- 25 per cent of acreage

(Table continued on next page.)

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TABLE 2

Operations Requiring Use of Seasonal Labor and Time of Need
by Crop -- San Luis Obispo County

Crop	Operation	Time of Need
Field crops: Wheat	Harvesting wheat by combine Cotton picking -- 80 per cent by seasonal workers Harvesting wheat by combine Cotton picking -- 80 per cent by seasonal workers	July 1-31 -- 40 per cent of August 1-31 -- 40 per cent of September 1-30 -- 20 per cent October 1-31 -- 40 per cent of crop
Grain -- wheat, oats, and corn	Hauling bulk grain to ranch bins and to ports from Central Valley district Harvesting by combine -- other districts -- 80 per cent by seasonal workers	July 1-31 -- 40 per cent of August 1-31 -- 40 per cent of September 1-30 -- 20 per cent October 1-31 -- 40 per cent of crop
Hay -- other grasses (mostly grain)	Mowing -- 25 per cent by seasonal workers	May 1-31 -- 75 per cent of June 1-31 -- 25 per cent of crop

(Table continued on next page.)

Table 2 continued

Crop	Operation	Time of need
Field crops: (continued)	Raking -- 25 per cent by seasonal workers	May 1-31 -- 75 per cent of acreage June 1-15 -- 25 per cent of acreage
	Shocking -- 25 per cent by seasonal workers	May 1-31 -- 75 per cent of acreage June 1-15 -- 25 per cent of acreage
	Trimming -- 25 per cent by seasonal workers	May 1-31 -- 75 per cent of acreage June 1-15 -- 25 per cent of acreage
	Baling (25 per cent of crop) -- 60 per cent by seasonal workers	May 15-31 -- 20 per cent of tonnage baled June 1-30 -- 50 per cent of tonnage baled July 1-15 -- 30 per cent of tonnage baled
	Seeds -- flower Hoeing Irrigating Harvesting	February to June, inclusive April to September, inclusive July to November, inclusive
Sugar beets	Thinning	February -- 12 per cent of acreage March -- 25 per cent of acreage April -- 50 per cent of acreage May -- 13 per cent of acreage
	Hoeing -- first time	March -- 20 per cent of acreage April -- 40 per cent of acreage May -- 40 per cent of acreage
	second time	May -- 20 per cent of acreage June -- 60 per cent of acreage July -- 20 per cent of acreage
	Topping and loading	August -- 39 per cent of crop September -- 38 per cent of crop October -- 23 per cent of crop
Vegetable crops: Peas -- bush*	Hoeing -- twice	January -- 30 per cent of winter acreage February -- 30 per cent of winter acreage March -- 30 per cent of winter acreage April -- 10 per cent of winter acreage

(Table continued on next page.)

Name	Address	City
J. H. Smith	123 Main St.	New York
W. J. Brown	456 Oak Ave.	Chicago
M. L. Green	789 Elm St.	Boston
R. K. White	101 Pine St.	Philadelphia
S. P. Black	202 Cedar St.	San Francisco
T. Q. Yellow	303 Birch St.	Los Angeles
V. R. Purple	404 Spruce St.	Portland
X. S. Blue	505 Ash St.	Seattle
Y. T. Red	606 Hickory St.	Denver
Z. U. Grey	707 Walnut St.	Nashville
A. V. Silver	808 Chestnut St.	Columbus
B. W. Gold	909 Locust St.	Indianapolis
C. X. Bronze	1010 Sycamore St.	Cincinnati
D. Y. Copper	1111 Poplar St.	St. Louis
E. Z. Iron	1212 Magnolia St.	Kansas City
F. A. Steel	1313 Dogwood St.	Omaha
G. B. Lead	1414 Redwood St.	Lincoln

Table 2 continued

Crop	Operation	Time of need
Vegetable crops: (continued)	Sulfuring -- two times	March and April -- all acreage each month
	Picking	February -- 10 per cent of spring crop March -- 30 per cent of spring crop April -- 40 per cent of spring crop May -- 20 per cent of spring crop
Poas -- pole	Setting poles -- 50 per cent by seasonal workers	April 15-30 -- 10 per cent of acreage May 1-30 -- 20 per cent of acreage June 1-30 -- 70 per cent of acreage
	Picking	July -- 2 per cent of fall crop August 1-31 -- 27 per cent of fall crop September 1-30 -- 51 per cent of fall crop October 1-10 -- 20 per cent of fall crop
Lettuce	Thinning	January -- 335 acres February -- 335 acres March -- 335 acres June -- 217 acres July -- 217 acres August -- 217 acres
	Hoeing	March -- 335 acres April -- 335 acres May -- 335 acres July -- 217 acres August -- 217 acres September -- 217 acres
	Cutting earlot shipments 34 cars = 10,608 crates	March -- 11 cars April -- 4 cars May -- 10 cars October -- 5 cars November -- 3 cars
	Cutting and packing -- dry pack for truck shipment 181,902 crates	March -- 20 per cent of crop April -- 20 per cent of crop May -- 20 per cent of crop June -- amount negligible August -- 13 per cent of crop September -- 13 per cent of crop

(Table continued on next page.)

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Table 2 continued

Crop	Operation	Time of need
Vegetable crops: (continued)	Cutting and packing (continued)	October -- 13 per cent of crop
String beans	Picking	May -- 15 per cent of crop June -- 20 per cent of crop July -- 15 per cent of crop September -- 20 per cent of crop October -- 10 per cent of crop Balance -- scattered and inconsequential
Tomatoes	Transplanting to field	May -- 75 per cent of acreage June -- 25 per cent of acreage
	Replanting	May -- 50 per cent of job June -- 50 per cent of job
	Hoeing	July -- all of job
	Picking -- for shipping	August -- 5 per cent of crop September -- 28 per cent of crop October -- 55 per cent of crop November -- 12 per cent of crop
Orchard crops:		
Apricots	Picking	July -- all of crop
	Cutting for drying -- 75 per cent of crop	July -- all of job
	Other dry yard labor	July-- all of job
Almonds	Knocking	August -- 20 per cent of crop September -- 40 per cent of crop October -- 30 per cent of crop November -- 10 per cent of crop
	Hulling -- by machine (including hand sorting and sacking)	August -- 20 per cent of crop September -- 40 per cent of crop October -- 30 per cent of crop November -- 10 per cent of crop
Grapes	Picking -- 25 per cent by seasonal workers	September 15-30 -- 50 per cent of crop October 1-15 -- 50 per cent of crop
Prunes	Picking up	September -- all of crop
	Dry yard work	September -- all of job
Walnuts	Harvesting and hulling by hand	September 20-30 -- 10 per cent of crop October 1-30 -- 75 per cent of crop November 1-15 -- 15 per cent of crop

NAME	ADDRESS	CITY
<p>Mr. J. H. Smith</p> <p>123 Main Street</p> <p>Springfield, Mass.</p>	<p>123 Main Street</p> <p>Springfield, Mass.</p>	<p>Springfield, Mass.</p>
<p>Mr. W. B. Jones</p> <p>456 Elm Street</p> <p>Portland, Me.</p>	<p>456 Elm Street</p> <p>Portland, Me.</p>	<p>Portland, Me.</p>
<p>Mr. C. D. Brown</p> <p>789 Oak Street</p> <p>Boston, Mass.</p>	<p>789 Oak Street</p> <p>Boston, Mass.</p>	<p>Boston, Mass.</p>
<p>Mr. E. F. Green</p> <p>101 Pine Street</p> <p>New York, N. Y.</p>	<p>101 Pine Street</p> <p>New York, N. Y.</p>	<p>New York, N. Y.</p>
<p>Mr. G. H. White</p> <p>234 Cedar Street</p> <p>Philadelphia, Pa.</p>	<p>234 Cedar Street</p> <p>Philadelphia, Pa.</p>	<p>Philadelphia, Pa.</p>
<p>Mr. I. J. Black</p> <p>567 Birch Street</p> <p>Chicago, Ill.</p>	<p>567 Birch Street</p> <p>Chicago, Ill.</p>	<p>Chicago, Ill.</p>
<p>Mr. K. L. Gray</p> <p>890 Spruce Street</p> <p>San Francisco, Cal.</p>	<p>890 Spruce Street</p> <p>San Francisco, Cal.</p>	<p>San Francisco, Cal.</p>
<p>Mr. M. N. Hall</p> <p>1122 Walnut Street</p> <p>St. Louis, Mo.</p>	<p>1122 Walnut Street</p> <p>St. Louis, Mo.</p>	<p>St. Louis, Mo.</p>

Findings of Seasonal Labor Needs.-- Details and summaries of seasonal labor requirements of San Luis Obispo County agriculture are presented as table 3. The "size of task" are figures drawn from table 1 in terms of either acreage, or output in tons, crates, boxes, or whatever unit is commonly used. The "output per man-day" is an average figure for the entire acreage or output figured in packed crates, hampers, or boxes (in case of fruits and vegetables). If the work is of a nature that requires a crew different members of which perform different tasks (such as cutting, trimming, loading, and hauling cauliflower; trimming and crating celery, etc.), then the average shown is per man based on the entire crew. Length of day is 9 hours unless otherwise stated. Wide variations in output occur between farm and farm, field and field, and season and season, because of differences in soil types, climatic conditions, weeds, yields, and other factors influencing the amount of work that a laborer can perform in a given day. Moreover, the basis of output is a mature, experienced male worker without reference to use of women, children, and more or less inexperienced help that is sometimes used in connection with certain of the tasks requiring use of seasonal workers. The column headed "available days" reflects (a) limitations set from the period within which the work must be performed because of the nature of the task, such as transplanting, thinning, weeding, and cutting, and (b) available days as determined by weather conditions, inclement weather reducing the number of days when a required task can be performed. The "required number of individuals" is given in terms of workers as noted above in connection with "output per man-day."

It is probable that the estimated number of workers required, as recorded in table 3, will often be too low, for the reason that "peaks" frequently occur, during which an unusually large proportion of the job is done in a very short period. This would naturally require a much greater number of workers than when the work is spread over a longer period, even though the total amount of labor (in man-days) remains the same.

TABLE 3

Seasonal Labor Needs, San Luis Obispo County -- by Months and Tasks

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
January	Peas (bush): Hoeing	2,670 acres	2 acres	1,335	18	75
	Lettuce: Thinning	335 acres	0.5 acre	670	18	38
	Totals			2,005	18	112 man-months
February	Seed crops: Hoeing, etc.	--	--	345	23	15
	Sugar beets: Thinning	274 acres	0.5 acre	548	23	24
	Peas (bush): Hoeing	2,670 acres	2 acres	1,375	23	60
	Picking	25,120 crates	5 crates	5,024	23	219
	Lettuce: Thinning	335 acres	0.5 acre	670	23	30
	Totals			7,962	23	347 man-months
March	Seed crops: Hoeing, etc.	--	--	330	22	15
	Sugar beets: Thinning	570 acres	0.5 acre	1,140	22	52
	Hoeing - first time	456 acres	2.0 acres	228	11	21 (from 15th to 31st)
	Peas (bush): Hoeing	2,670 acres	2 acres	1,375	22	63
	Sulfuring	8,900 acres				
	Picking	75,360 crates	5 crates	15,072	22	686
	Lettuce: Thinning	335 acres	0.5 acre	670	22	31
	Hoeing	335 acres	1.0 acre	335	22	16
	Cutting carlot shipments -- 11 cars	3,432 crates	30 crates	1,141	22	52
	Cutting and packing truck shipments	38,500 crates	20 crates	1,925	22	88
	Totals			22,216	22	1,010 man-months
April	Seed crops: Hoeing, irrigating	--	--	360	24	15
	Sugar beets: Thinning	1,139 acres	0.5 acre	2,278	24	95
	Hoeing - first time	911 acres	2.0 acres	456	24	19
	Peas (bush): Hoeing	1,780 acres	2 acres	890	24	37
	Sulfuring					
	Picking	100,480 crates	5 crates	20,960	24	874 †
	Peas (pole): Setting poles	42 acres ‡	0.5 acre	84	12	7 (from 15th to 30th)
	Lettuce: Hoeing	335 acres	1.0 acre	335	24	14

Table continued on next page.

Table 1. Summary of Survey Results						
Year	Location	Species	Count	Percentage	Notes	Remarks
1994	Lake Michigan	Common Loon	12	100%	100%	100%
		Double-crested Cormorant	15	100%	100%	100%
		Great Lakes Grebe	18	100%	100%	100%
		Ring-billed Gull	20	100%	100%	100%
		Common Goldeneye	22	100%	100%	100%
		Lesser Scaup	25	100%	100%	100%
		Common Merganser	28	100%	100%	100%
		Red-throated Loon	30	100%	100%	100%
		Common Noddy	32	100%	100%	100%
		Black-throated Loon	35	100%	100%	100%
1995	Lake Michigan	Common Loon	15	100%	100%	100%
		Double-crested Cormorant	18	100%	100%	100%
		Great Lakes Grebe	20	100%	100%	100%
		Ring-billed Gull	22	100%	100%	100%
		Common Goldeneye	25	100%	100%	100%
		Lesser Scaup	28	100%	100%	100%
		Common Merganser	30	100%	100%	100%
		Red-throated Loon	32	100%	100%	100%
		Common Noddy	35	100%	100%	100%
		Black-throated Loon	38	100%	100%	100%
1996	Lake Michigan	Common Loon	18	100%	100%	100%
		Double-crested Cormorant	20	100%	100%	100%
		Great Lakes Grebe	22	100%	100%	100%
		Ring-billed Gull	25	100%	100%	100%
		Common Goldeneye	28	100%	100%	100%
		Lesser Scaup	30	100%	100%	100%
		Common Merganser	32	100%	100%	100%
		Red-throated Loon	35	100%	100%	100%
		Common Noddy	38	100%	100%	100%
		Black-throated Loon	40	100%	100%	100%
1997	Lake Michigan	Common Loon	20	100%	100%	100%
		Double-crested Cormorant	22	100%	100%	100%
		Great Lakes Grebe	25	100%	100%	100%
		Ring-billed Gull	28	100%	100%	100%
		Common Goldeneye	30	100%	100%	100%
		Lesser Scaup	32	100%	100%	100%
		Common Merganser	35	100%	100%	100%
		Red-throated Loon	38	100%	100%	100%
		Common Noddy	40	100%	100%	100%
		Black-throated Loon	42	100%	100%	100%
1998	Lake Michigan	Common Loon	22	100%	100%	100%
		Double-crested Cormorant	25	100%	100%	100%
		Great Lakes Grebe	28	100%	100%	100%
		Ring-billed Gull	30	100%	100%	100%
		Common Goldeneye	32	100%	100%	100%
		Lesser Scaup	35	100%	100%	100%
		Common Merganser	38	100%	100%	100%
		Red-throated Loon	40	100%	100%	100%
		Common Noddy	42	100%	100%	100%
		Black-throated Loon	45	100%	100%	100%

Table 1. Summary of Survey Results

Table 3 continued

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
April (continued)	Lettuce: (continued)					
	Cutting carlot shipments -- 4 cars	1,298 crates	30 crates	44	4	11
	Cutting and packing truck shipments	38,500 crates	20 crates	1,925	24	81
	Totals			27,332	24	1,139 man-months
May	Grain hay: Mowing	9,000 acres †	10 acres	900	26	35
	Raking	9,000 acres †	20 acres	450	26	18
	Shocking	9,000 acres †	30 acres	300	26	12
	Trimming	9,000 acres †	10 acres	900	26	35
	Baling	2,292 tons †	4 tons	573	13	46 (from 15th to 31st)
	Seed crops: Hoeing, irrigating	—	—	390	26	15
	Sugar beets: Thinning	296 acres	0.5 acre	592	13	46 (from 1st to 15th)
	Hoeing - first time	911 acres	2.0 acres	456	26	18
	- second time	456 acres	3.0 acres	152	26	6
	Peas (bush): Picking	5,024 crates	5 crates	10,048	26	387
	Peas (pole): Setting poles	85 acres †	0.5 acre	170	26	7
	Lettuce: Hoeing	335 acres	1.0 acre	335	26	13
	Cutting carlot shipments -- 10 cars	3,120 crates	30 crates	104	10	11 (for 10 days)
	Cutting and packing truck shipments	38,500 crates	20 crates	1,925	26	74
	String beans: Picking	947 cwt.	200 pounds	474	26	19
	Tomatoes: Transplanting to field	258 acres	0.5 acre	516	26	20
	Replanting	515 acres	2 acres	258	26	10
	Totals			18,543	26	714 man-months
June	Grain: Harvesting (districts other than Carisa Plain)	6,680 acres †	6 acres (in 8 hours)	1,114 (of 8 hours)	25	45
	Grain hay: Mowing	3,000 acres †	10 acres	300	12	25 (from 1st to 15th)
	Raking	3,000 acres †	20 acres	150	12	13 (from 1st to 15th)

Table continued on next page.

Table 3 continued

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
June (continued)	Grain hay: (continued)					
	Shocking	3,000 acres †	30 acres	100	12	9 (from 1st to 15th)
	Trimming	3,000 acres †	10 acres	300	12	25 (from 1st to 15th)
	Baling	4,860 tons †	4 tons	1,215	25	49
	Seed crops: Hoeing and irrigating	--	--	375	25	15
	Sugar beets: Hoeing -- second time	1,367 acres	3.0 acres	456	25	19
	Peas (pole): Setting poles	298 acres †	0.5 acre	596	25	24
	Lettuce: Thinning	217 acres	0.5 acre	434	25	18
	String beans: Picking	1,262 cwt.	200 pounds	631	25	26
	Tomatoes: Transplanting to field	258 acres	0.5 acre	516	25	21
	Replanting	515 acres	2.0 acre	258	25	11
	Totals			6,445	25	258 man-months
July	Grain: Harvesting wheat (Carisa Plain)	8,180 acres †	10 acres	818	26	32
	Hauling bulk grain	150,700 cwt.	6	1,636	26	63
	Harvesting (other districts)	20,040 acres †	6 acres (in 8 hours)	3,340 (or 8 hours)	26	129
	Grain hay: Baling	3,456 tons †	4 tons	864	13	67 (from 1st to 15th)
	Seed crops: Irrigating and harvesting	--	--	390	26	15
	Sugar beets: Hoeing -- second time	456 acres	3.0 acres	152	26	6
	Peas (pole): Picking	2,972 crates	8 crates	372	7	53 (for 7 days)
	Lettuce: Thinning	217 acres	0.5 acre	434	26	17
	Hoeing	217 acres	1.0 acre	217	26	9
	String beans: Picking	947 cwt.	200 pounds	474	26	19
	Tomatoes: Hoeing	1,029 acres	1 acre	1,029	26	40
	Apricots: Picking	224 tons	1 ton	224	26	9
	Cutting for drying	168 tons	0.33 ton			
	Other dry-yard labor -- at 11 hours per green ton	168 tons	--	206	26	8
	Totals			10,156	26	391 man-months

Table continued on next page.

Table 3 continued

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
August	Grain: Harvesting wheat (Carisa Plain)	8,180 acres ‡	10 acres	818	26	32
	Hauling bulk grain	150,700 cwt.	§	1,636	26	63
	Harvesting (other districts)	6,680 acres ‡	6 acres (in 8 hours)	1,114 (of 8 hours)	26	43
	Seed crops: Irrigating and harvesting	--	--	390	26	15
	Sugar beets: Topping and loading	7,285 tons	5 tons	1,457	26	56
	Peas (pole): Picking	40,115 crates	8 crates	5,015	26	193
	Lettuce: Thinning	217 acres	0.5 acre	434	26	17
	Hoeing	217 acres	1.0 acre	217	26	9
	Cutting and packing truck shipments	23,647 crates	20 crates	1,183	26	46
	Tomatoes: Picking for shipping	7,050 lugs	20 packed lugs	353	26	14
	Almonds: Knocking	96 tons	150 pounds	1,280	26	50
	Hulling by machine	96 tons	400 pounds	480	26	19
	Totals			14,377	26	553 man-months
September	Beans: Threshing	22,544 cwt. ‡	25 cwt.	902	26	35
	Grain: Harvesting wheat (Carisa Plain)	4,090 acres ‡	10 acres	409	26	16
	Hauling bulk grain	75,350 cwt.	-- §	818	26	32
	Seed crops: Irrigating and harvesting	--	--	390	26	15
	Sugar beets: Topping and loading	7,068 tons	5 tons	1,414	26	55
	Peas (pole): Picking	75,773 crates	8 crates	9,472	26	365
	Lettuce: Hoeing	217 acres	1.0 acre	217	26	9
	Cutting and packing truck shipments	23,647 crates	20 crates	1,183	26	46
	String beans: Picking	1,262 cwt.	200 cwt.	631	26	25
	Tomatoes: Picking for shipping	39,480 lugs	20 packed boxes	1,974	26	76
	Almonds: Knocking	192 tons	150 pounds	2,560	26	99 ¶
	Hulling by machine	192 tons	400 pounds	960	26	37
	Grapes: Picking	338 tons ‡	1 ton	338	13	26 (from 15th to 30th)

Table continued on next page.

NAME	RESIDENCE	DATE	AMOUNT		REMARKS
			PAID	RECEIVED	
JOHN J. BROWN	NEW YORK	1890	100.00		PAID TO BROWN
JAMES H. WHITE	NEW YORK	1891	200.00		PAID TO WHITE
WILLIAM D. GREEN	NEW YORK	1892	150.00		PAID TO GREEN
CHARLES E. BLACK	NEW YORK	1893	300.00		PAID TO BLACK
HENRY F. GRAY	NEW YORK	1894	120.00		PAID TO GRAY
EDWARD G. HARRIS	NEW YORK	1895	250.00		PAID TO HARRIS
FRANK L. KYLE	NEW YORK	1896	180.00		PAID TO KYLE
ALFRED M. LEWIS	NEW YORK	1897	220.00		PAID TO LEWIS
GEORGE N. MILLER	NEW YORK	1898	160.00		PAID TO MILLER
ROBERT O. NELSON	NEW YORK	1899	280.00		PAID TO NELSON
JOHN P. OLIVER	NEW YORK	1900	140.00		PAID TO OLIVER
WALTER Q. PETERSON	NEW YORK	1901	320.00		PAID TO PETERSON
HERBERT R. ROSS	NEW YORK	1902	190.00		PAID TO ROSS
CLAUDE S. SMITH	NEW YORK	1903	260.00		PAID TO SMITH
THEODORE T. TAYLOR	NEW YORK	1904	170.00		PAID TO TAYLOR
JOSEPH U. UNDERHILL	NEW YORK	1905	310.00		PAID TO UNDERHILL
ALVIN V. VAN DUSEN	NEW YORK	1906	130.00		PAID TO VAN DUSEN
WALTER W. WATSON	NEW YORK	1907	290.00		PAID TO WATSON
EDWARD X. WILSON	NEW YORK	1908	110.00		PAID TO WILSON
FRANK Y. WOOD	NEW YORK	1909	240.00		PAID TO WOOD
ALFRED Z. YOUNG	NEW YORK	1910	160.00		PAID TO YOUNG

Table 3 continued.

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
September (continued)	Prunes: Picking up	840 tons	2,000 pounds	840	26	33
	Dipping and drying --at 8 hours per green ton	840 tons	---	747	26	29
	Walnuts: Harvesting and hulling by hand	24 tons	150 pounds	320	8	40 (from 20th to 30th)
	Totals			23,175	26	892 man-months
October	Beans: Threshing by stationary machine	15,030 cwt. †	25 cwt.	602	20	31 (from 1st to 25th)
	Seed crops: Harvesting	--	--	360	24	15
	Sugar beets: Topping and loading	4,296 tons	5 tons	860	24	36
	Peas (pole): Picking	29,715 crates	8 crates	3,715	10	372 (from 1st to 10th)
	Lettuce: Cutting carlot shipments-- 5 cars	1,560 crates	30 crates	52	5	11 (for 5 days)
	Cutting and packing truck shipments	23,647 crates	20 crates	1,183	24	50
	String beans: Picking	631 cwt.	200 pounds	316	24	14
	Tomatoes: Picking for shipping	77,550 lugs	20 packed lugs	3,878	24	162
	Almonds: Knocking	144 tons	150 pounds	1,920	24	80
	Hulling by machine	144 tons	400 pounds	720	24	30
	Grapes: Picking	338 tons †	1 ton	338	12	28 (from 15th to 30th)
	Walnuts: Harvesting and hulling by hand	178 tons	150 pounds	2,374	24	99
	Totals			16,318	24	680 man-months
	Seed crops: Harvesting	--	--	360	24	15
November	Lettuce: Cutting carlot shipments-- 3 cars	936 crates	30 crates	32	3	11 (for 3 days)
	Tomatoes: Picking for shipping	16,920 lugs	20 packed lugs	846	10	85 (from 1st to 10th)
	Almonds: Knocking	48 tons	150 pounds	640	10	64 (for 10 days)
	Hulling by machine	48 tons	400 pounds	240	10	24 (for 10 days)

Table continued on next page.

Table 3 continued

Month	Crop and task	Size of task	Output per man-day	Required man-days	Available days	Required number of workers*
November (continued)	Walnuts: Harvesting and hulling by hand	36 tons	150 pounds	480	12	40 (from 1st to 15th)
	Totals			2,598	24	109 man-months
December	— No appreciable amount of seasonal labor needed.					

* On a monthly basis unless otherwise noted.

† On seasons when the spring pea crop has been good, it is probable that as many as 400 pickers have been employed during the "peak" in March or April.

‡ Estimated portion of task done by seasonal workers.

§ Hauling bulk grain to ranch bins and to shipping point requires about the same amount of labor as harvesting.

¶ A heavy crop of almonds probably would require from 400 to 500 men for knocking.

* A list of the names of the persons who have been appointed to the various positions in the organization.

1. The following persons have been appointed to the various positions in the organization:

* The following persons have been appointed to the various positions in the organization:

* The following persons have been appointed to the various positions in the organization:

2. The following persons have been appointed to the various positions in the organization:

* The following persons have been appointed to the various positions in the organization:

* The following persons have been appointed to the various positions in the organization:

Name of Person	Position	Date	Signature	Remarks
John Doe	President	1912	[Signature]	[Remarks]
Jane Smith	Secretary	1912	[Signature]	[Remarks]

TABLE 4
Summary of Seasonal Labor Needs by
Months
San Luis Obispo County
1935

Month	Required man-days of seasonal labor	Available work days	Required man-months of seasonal labor
January	2,005	18	112
February	7,962	23	347
March	22,216	22	1,010
April	27,332	24	1,139
May	18,543	26	714
June	6,445	25	258
July	10,156	26	391
August	14,377	26	553
September	23,175	26	892
October	16,318	24	680
November	2,598	24	109
December	--	20	--
Total	151,127	--	6,205

TABLE 4
Summary of Seasonal Labor Needs by
Months
San Luis Obispo County
1935

Month	Required man-days of seasonal labor	Available work days	Required man-days of seasonal labor
January	2,008	18	112
February	7,982	23	347
March	22,216	22	1,010
April	27,332	24	1,139
May	18,642	26	714
June	8,448	26	268
July	10,166	26	391
August	14,277	26	553
September	22,173	26	892
October	16,218	24	680
November	2,698	24	109
December	---	20	---
Total	151,127	---	8,208

